Job Contact Networks and the Ethnic Minorities*

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Abstract: Using data from the UK Quarterly Labour Force Survey, this paper examines the job finding methods of different ethnic groups in the UK. Our empirical findings suggest that, though personal networks are a popular method of finding a job for the ethnic minorities, the foreign born and those who identify themselves as non-British, they are not necessarily the most effective either in terms of gaining employment or in terms of the level of job achieved. However, there are some important differences across ethnic groups with some groups losing out disproportionately from using personal networks.

Keywords: Job search, networks, social capital, ethnic disadvantage.

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1 Introduction

Individuals seek jobs using a variety of methods and the methods they use seem to matter. These methods include the use of public employment agencies, their network of friends and family, responding to newspaper advertisements and making unsolicited and direct approaches to employers. A number of studies for a range of countries have emphasized the popularity of using friends and family as a job search mechanism and indicate that they are an effective mechanism for obtaining job offers (Rees, 1966; Granovetter, 1974, 1995; Blau and Robins, 1990; Topa, 2000; Wahba and Zenou, 2005; Bentolila et. al, 2010; Pellizzari, 2010). The empirical evidence reveals that around 50% of individuals obtain or hear about jobs through friends and family (Holzer 1988; Montgomery, 1991; Gregg and Wadsworth, 1996; Addison and Portugal, 2001). Such methods have the advantage that they are relatively less costly and may provide more reliable information about jobs compared to other methods.[1]

Little is known, however, about the nature of job search methods across different ethnic groups and it is not clear how effective different methods are at linking job seekers to jobs for different ethnic groups. In particular, do the kinds of positive effects that have been found for friends and family hold across all ethnic groups in the labor market? One reason to be sceptical is that the degree of assimilation varies considerably across ethnic groups and certain ethnic groups are generally seen as being more economically (in terms of employment, expected earnings and occupational attainment), socially and spatially isolated with respect to the white majority and compared to other more successful ethnic groups (Peach, 1996; Akerlof, 1997; Akerlof and Kranton, 2000; 2010; Battu et al., 2007).[2] In essence, their connections may well be with their own ethnic group in their own area and the effectiveness of these connections may be diminished because of the higher incidence of unemployment amongst their own ranks. Having fewer connections to employed individuals makes it more difficult to receive inside information about jobs and reduces the likelihood that one is recommended by current employees to employers.[3]

[1] There is also a theoretical literature on job search and social networks. See, in particular, Diamond (1981), Montgomery (1991), Mortensen and Vishwanath (1994), Calvó-Armengol (2004), Calvó-Armengol and Jackson (2004), Calvó-Armengol and Zenou (2005), and the recent literature surveyed by Datcher Loury and Ioannides (2005).

[2] In this paper we do not analyse why some ethnic workers choose to adopt or reject particular values. See Akerlof and Kranton (2000, 2010) and Battu et al. (2007) for a detailed analysis on identity choices.

[3] Another argument presented by Holzer (1987, 1988) is that informal methods may allow race to become more important in hiring, and so be detrimental to minorities' chances of gaining employment. Formal methods, since they provide a more explicit criteria by which

The empirical evidence that exists is limited and mostly for the US. Falcón and Melendez (1996) find that Latinos in Boston are more likely to use personal networks to gain employment relative to other job search methods. However, in an earlier study Falcón (1995) finds that Boston Latino's use of personal networks actually reduces their earnings. Green et al. (1999) also find an earnings penalty for Hispanics and Whites from utilising informal job searches (personal networks) as opposed to formal approaches such as replying to advertisements. In a more recent paper Mouw (2002), using longitudinal data, finds that Black workers who used personal contacts to find employment did no worse compared to where they used formal methods. The European literature on this is practically non-existent, with little or no attention paid to the connections that ethnic individuals have or the role of connections in obtaining employment.

An exception is the paper by Frijters et. al (2005). They also examine ethnic job search methods in the UK but focuses on the differences between immigrants and those born in the UK. They find that immigrants do not effectively compete for jobs, which may explain why immigration has little impact on native employment. Even if the present paper shares some common features with the study by Frijters et. al (2005), its focus and analysis are different. First, we not only study Black, Indian, Pakistani/Bangladeshi immigration but also look at more recent immigration by covering EU enlargement and the waves of eastern EU immigrants into the UK. Second, we mainly focus on immigrants and on the relationship between job-search methods and labor-market outcomes of these immigrants. Finally, we also study ethnic identity and assimilation issues and how they affect the efficiency of social networks in finding a job.

To be more precise, this paper aims at answering two main questions. First, what job search methods do different ethnic groups utilize and do the least assimilated make greater recourse to friends and family? Second, do different methods of job search generate differential labor market outcomes and is there a penalty from using friends and family for the least assimilated? We use consecutive waves of the UK Quarterly Labour Force Survey (QLFS) and focus throughout on males. Our empirical findings suggest that though personal networks are a popular method of finding a job for the ethnic minorities in the UK, they are not necessarily the most effective either in terms of gaining employment or in terms of the level of job achieved. However, there are some important differences across ethnic groups with some groups losing out disproportionately from using personal networks.

employers can evaluate potential employees, may help Blacks obtain employment.

The remainder of the paper has the following structure. Section 2 discusses our dataset and offers some descriptive statistics including information on the use of various job search methods across ethnic groups. Section 3 presents our empirical results. Section 4 discusses a number of empirical extensions. The final section summarizes our findings.

2 Data and descriptive statistics

The empirical analysis presented in this paper utilizes data drawn from twelve consecutive waves of the Quarterly Labour Force Survey (QLFS) – the first wave is the December 1998 to February 1999 wave while the last wave is the September 2001 to November 2001 wave. Each wave covers around 60,000 households incorporating around 150,000 individuals. Only males of working age (aged 16 to 65) are used in our analysis.

The design of the QLFS has a quasi-panel aspect to it – individuals should be surveyed for five consecutive quarters before leaving the sample. Thus, in each sample around 12,000 households and 30,000 individuals should leave the sample and a similar number of each join the sample (this abstracts from the possibility of unintended levels of sample attrition). Thus, we should be able to view each individual for one year on a quarterly basis, and this quasi-panel aspect of the QLFS data is utilized in the empirical analyses discussed below. Aside from the quasi-panel element of the QLFS the dataset offers the advantage that it contains extensive information on the current job search methods of the unemployed and the job search methods of those in their first ever job or those entering a new job after a period of unemployment. Another advantage of the dataset is that it contains sufficient numbers from each ethnic group in the UK to warrant econometric estimation.[4]

The analysis initially distinguishes between five ethnic groups in the UK. These are White, Black, Indian, Pakistani/Bangladeshi and Other. The non-white groups differ in terms of socio-economic outcomes and the time of migration to the UK. Indians are the largest ethnic group in the UK but also the most economically successful with their migration rates peaking in the late 1960s and early 1970s. The Pakistani and Bangladeshi groups have differing migration patterns (the Bangladeshis arrived later) but were combined since

[4]The other dataset that was considered for this analysis, the British Household Panel Survey (BHPS), does have a number of advantages over the QLFS, including more information on the nature and extent of the respondents' personal network and a longer panel. However, the BHPS does not contain such rich information on job search methods and with a total sample of between 10 to 15,000 per wave it does not provide sufficient numbers of ethnic minority respondents to permit econometrically robust estimations.

both are predominantly Muslim, emanate from rural areas within their origin countries and are economically less successful than Indians. Black Caribbeans dominate the Black group and they represent the first large scale migration into the UK,just after the second world war and during the 1950s, and also tend to be economically less successful but socially more integrated.[5]

The job search method data we utilize is obtained from the respondents in two ways. First, the currently unemployed are asked which job search method is their primary method for finding employment – they are shown a list of fifteen possibilities and asked which is the main one used (only one can be chosen). The fifteen options are: job centre, careers office, job club, private employment agency, advertise yourself, answer adverts, situations vacant, direct approach, friends and family, waiting for responses, looking for premises/equipment, seeking permits, obtaining finance, anything else, not seeking employment.

These are aggregated into four groups or methods in our empirical analyses:[6] direct approach; adverts (advertise yourself, answer adverts, situations vacant); institutional (job centre, careers office, job club, private employment agency, waiting for responses, anything else, not seeking employment) and personal networks (friends and family).

Second, the recently employed (i.e. in their current job for no more than three months) are asked which job search method was the main method by which they obtained their current job – they are shown a list of eight possibilities and asked which was the main one used (only one can be chosen). The eight options are:[7] replying to a job advertisement, job centre or job market, careers office, job club, private employment agency or business, hearing from someone who worked there, direct application, some other way.

These are also aggregated into four methods in our empirical analyses: direct approach (direct application); adverts (replying to a job advertisement); institutional (job centre or job market, careers office, job club, private employment agency or business and some other way) and personal networks (hearing from someone who worked there).

To a considerable degree, the two aggregated variables we generate from

[5]For details on ethnic groups in the UK see Modood et al. (1997).

[6]Three of the original categories (looking for premises/equipment, seeking permits, and obtaining finance) are excluded from the analysis on the basis that they contain very small numbers of observations (less than 150 combined) and (being very much related to business start-up) don't fit in well with any other group.

[7]By definition this question excludes the three business start-up options available in the earlier question. Some of the categories in the second question are effectively amalgamations of categories in the first question.

the raw information are generally consistent with each other, encompassing the same number of categories and broadly the same range of raw information within each of those categories.

To ensure a reasonable sample size for our empirical analyses, we aggregate the twelve waves of data referred to above. However, to ensure that no one individual appears more than once in any particular empirical analysis, we use only the first instance where their employment status 'qualifies' them for inclusion in that empirical analysis.

Table 1 shows the primary job search methods used by our sample of unemployed individuals. By far the two most commonly used methods are institutional and adverts, with less than 10% of the unemployed having friends and family as their main job search method (personal networks). This general ranking has been found elsewhere (Gregg and Wadsworth, 1996) and the relative unimportance of personal networks in the UK has also been found by Fritjers et al. (2005). There are also important differences across different ethnic groups. Friends and family are used more heavily by Indians, Pakistanis,Bangladeshis and 'Others' compared to Whites and Blacks. 14.2% of the Pakistani/Bangladeshi group have friends and family as their primary job search method. Blacks (Black-Caribbean and Black-African) are the least likely to use personal networks (9.6% of them use personal networks) and are the most likely to resort to the institutional method. The Pakistani/Bangladeshi ethnic group are also less likely to use adverts compared to the other ethnic groups.

[*Insert Table* 1 *here*]

Table 2 shows what job search method was successful — not necessarily what they were using as their primary job search method. The job search methods that generated the greatest success for the newly employed were in order of importance institutional, personal networks and adverts. Direct applications were only deemed successful for around 15% of respondents. Nearly 30% of respondents were successful using personal networks. From Table 2 it is clear that although Indians, Pakistanis, Bangladeshis and 'Others' used personal networks the most (Table 1), there is little evidence that they benefited from this method more so than whites.

[*Insert Table* 2 *here*]

3 The empirical results

3.1 The determinants of job-search methods

The first stage of our empirical analysis examines the determinants of job search methods for the unemployed. As previously indicated the job search method data within the QLFS was aggregated together, turning fifteen separate methods into four aggregated ones. The nature of this dependent variable (four mutually-exclusive, non-ordered values) indicates that a multinomial logit estimation procedure would be appropriate. The default category in the estimations is the institutional method incorporating both state and private employment agencies.

We estimate four empirical models, which only differ in the way ethnic and/or assimilation information is incorporated into the analysis. Model 1 includes a simple dummy for whether or not the respondent is from an ethnic group. Model 2 disaggregates this single ethnic dummy into separate dummies for the Black, Indian, Pakistani and Bangladeshi and Other ethnic groups. Model 3, rather than using ethnic dummies, includes a set of assimilation variables: a dummy for whether the respondent was foreign born and (for those born outside of the UK) years since migration and its square. Model 4 incorporates both the four ethnic dummies from Model 2 and the three assimilation variables from Model 3.

Table 3 presents, for the unemployed sample as a whole and for each of the ethnic minorities individually, means for the variables used to explain the primary job search method chosen. These statistics present an interesting comparison of the different ethnic minority groups. The Pakistani and Bangladeshi unemployed respondents are the ones most likely to have been born in a foreign country; this, combined with the fact that they suffer the worst from unemployment amongst South Asians, have the lowest levels of attained UK educational qualifications and make the greatest use of their personal networks, does suggest that they have the greatest problems assimilating into the UK's mainstream labor market.

[*Insert Table* 3 *here*]

Table 4 presents the full set of results for Model 1. Table 5 presents a summary of all four models, focusing on the effects of the ethnic and assimilation variables. Given that the coefficients and z-statistics for the other variables in Models 2, 3 and 4 were not materially different from those in Model 1 we exclude them from Table 5 for the sake of brevity. Model 1 reveals that un-

employed ethnic group members utilize personal networks more than whites though this is just short of being statistically significant. There are no significant differences between ethnic group members and whites with respect to the use of direct approaches to employers or adverts. Given the heterogeneity of ethnic groups we replace the single ethnic dummy with separate dummies for Blacks, Indians, Pakistanis and Bangladeshis, and Others in Model 2. Here we find that Pakistani and Bangladeshi males are less likely to answer adverts, place their own adverts or respond to situations vacant columns in newspapers compared to whites. One reason for this is evident from the descriptive statistics in Table 3. Pakistanis and Bangladeshis are, out of all the unemployed,the ones least likely to possess good UK qualifications qualifications or A-levels and their equivalents) and success via adverts is likely to significantly depend on "objective" measures such as qualifications. The poor use of adverts may also reflect the low degree of assimilation of this group since confidence in, use of and responses to newspaper advertisements may only come with language proficiency and years of stay.

[*Insert Tables* 4 *and* 5 *here*]

The results from both Model 1 and Model 2 suggest that *ethnicity per se does not play a major role in the choice of job search methods*; as we shall see it is the assimilation (or otherwise) of the ethnic minorities that plays the significant role here. This lack of a direct ethnic effect is clearly evident in the case of Blacks where there is little discernible difference between them and whites with respect to job search methods and, as such, differential job search patterns would seem to offer little by way of explanation of the gap between Blacks and Whites in the labor market. This is not surprising since on various dimensions Blacks display greater levels of assimilation; they tend to be located in less geographically defined areas or communities with self-owned or self-oriented businesses, their primary language is English and almost half were born in the UK.

Therefore, Model 3 undertakes an explicit investigation as to whether assimilation, rather than ethnicity, has a role to play in determining the method of job search, and incorporates a dummy for being born outwith the UK, as well as years since first arrival in the UK (years since migration) and its square.[8] We find that use of the adverts method increases with years since

[8]For those born in the UK there is a value of zero for the years since migration variable and its square. This ensures that the 'default' respondent for these three migration variables combined is someone born in the UK. Were we not to include the foreign born variable the default respondent for the two migration variables would be the UK born respondents and

migration (reaching a peak at 24 years) and there is a strong negative effect from being foreign born. This may reflect language problems (though it is not possible to test this using the QLFS since no information is available on language proficiency) and the holding of foreign only qualifications, which may make replying to adverts less effective if prospective employers are unaware of what these qualifications are. The foreign born effect on the use of the adverts method almost exactly offsets the years since migration effect at its peak, such that after 24 years of living in the UK the foreign born are little different (in terms of their propensity to use the adverts method) than the UK born. One can argue that the use of the adverts method is indicative of integration/assimilation into the general labor market. Though this constitutes only one perspective on labor market assimilation, at more than two decades it does seem to indicate that assimilation is not particularly easy.

For the personal networks method, the years since migration variables are insignificant but there is a strong positive effect for the foreign born. This suggests that the foreign born make use of personal networks to an extent that does not differ according to their years since migration to the UK. This finding is consistent with the view that the foreign born make use of personal networks related to their 'home country' (the relevant 'émigré' community) since on arrival in the UK they are unlikely to have many contacts outwith their own ethnic group. The use of the direct approach increases with years since migration (reaching a peak at around 20 years). Given the degree of ethnic homophily direct approaches to employer's may be indicative of the use of broader networks where ethnic group members are directly approaching employers from their own community in ethnically-owned or ethnically-oriented businesses. Controlling for the individual ethnic dummies in Model 4 the assimilation variables behave as before.

The results from Models 3 and 4 are consistent with the notion of a gradual assimilation of migrants into the home country's labor market – over perhaps two decades or more migrants come to utilize the adverts method just about as much as the native born, but they never give up the labor market opportunities offered to them by their personal networks.

The remainder of the right-hand-side specification was the same for each of the four models, and we briefly discuss the results from the remaining variables. The "First Six Waves" dummy variable (for whether the observation of the unemployed respondent was from the first six waves of the twelve QLFS waves we used) showed a general tendency for a positive and significant effect for

those foreign born respondents who had only just arrived in the UK, a rather strange default grouping.

the personal networks method. This is consistent with both a business cycle effect (as we move through the twelve waves the UK's unemployment rate was declining and so there was less need of 'non-mainstream' methods[9]) and also a 'New Deal' effect (a new government initiative introduced in this period to cajole the unemployed into improving their job search activity); part of the New Deal initiative included greater supervision of the job search activities of the unemployed and this encourages the use of the institutional and adverts methods since they more readily provide documentation to support genuine claims of job search activity.

The marital status variables indicate that married people are more likely to utilize the alternatives to institutional method. The age and age-squared variables generate significant and consistent results for the direct approach method (this is less utilized in the middle of your working life) and young males are also less likely to make use of the adverts method. There are similar findings in Schmitt and Wadsworth (1993) and Boheim and Taylor (2001).

The relationship between educational qualifications and job search methods is investigated through a series of dummies indicating the respondent's highest qualification. Previous studies have found that personal networks are especially important for lowly educated workers (Corcoran et al., 1980; Boheim and Taylor, 2001). Our results support this. In particular, we find that the more highly educated (possessing a degree) are more likely to offer themselves directly to potential employers, are more likely to respond to advertisements and are less likely to make use of personal networks. The highly educated are in a sense more pro-active in selling themselves to potential employers via more mainstream methods. The greater use of personal networks by those with no qualifications (the omitted category) suggests that they are more likely to use local information networks and have a narrower job search area. The more educated would also seem to operate in a wider labor market and are less reliant on local information networks (Boheim and Taylor, 2001).

Having lived in the same area for a long period of time (Time here 1 and Time here 2) can increase the likelihood of using either the adverts or the personal networks method. Personal networks tend to be local so that moving from one area to another area is likely to disrupt/undermine the usefulness of personal networks and encourage the use of other methods. Those who have a long residential tenure may have greater opportunities to generate and maintain networks.

It is expected that the longer the duration of your current spell of unemployment the less likely you are to use any of the alternatives to the institutional

[9]Between 1998 and 2001 the unemployment rate in the UK fell from 4.6% to 3.2%.

method. Institutional methods (via formal organizations) may then be seen as a method of last resort and may be used by job seekers primarily when jobs are scarce (Abraham, 1993). Formal screening is also likely to make the use of the direct approach and adverts methods pointless for the long-term unemployed, and there is only so much that 'putting in a good word' can do for them via the personal networks method, and so they must rely on the least worst option – the institutional method.

We evaluate whether the duration of unemployment matters across ethnic groups by interacting the duration of unemployment and ethnicity. Ethnic group members with a longer period of unemployment have a lower propensity to utilize the direct approach method (racial prejudice perhaps reinforcing a general prejudice against the long-term unemployed) and in Model 1 only, a lower propensity to use personal networks relative to whites. There is little difference across whites and non-whites in this regard in the other three models.

Finally, high local rates of unemployment discourage all three of the main alternatives to the institutional method though only the coefficient on adverts displays statistical significance. High unemployment (low local demand) tends to go hand-in-hand with few vacancies, and hence there are few adverts to respond to and the direct approach and personal networks methods are looking for the proverbial needle in the haystack – respondents may simply keep a close eye on the minimal offerings on offer at the local job centre and wait for local employment prospects to improve.

To conclude our discussion of the determinants of job search method, ethnicity seems to play a modest role with assimilation variables playing a more important role. Those born outside the UK are more likely to make use of personal networks and over time assimilation helps the foreign born to embrace more mainstream methods of job search activity. In particular, those born within the UK and those who have stayed longer in the UK rely more heavily on the adverts method (advertise yourself, answer adverts, situations vacant). As such these findings support the notion that a lower degree of assimilation amongst non-whites results in a greater reliance on friends and family as a job search method.

3.2 The effects on employment

This section focuses on the following issue: irrespective of job search method do whites have a higher probability of finding work than nonwhites and do non-whites who are less assimilated (who use mainly personal networks) have a lower probability of finding work than nonwhites who are more assimilated?

This we test by examining the likelihood that individuals in the sample do find employment. In particular, we take those who are observed as being unemployed during their five-wave sample period and examine whether they enter employment (before they leave the QLFS sample). We construct a binary variable below and undertake a logit regression with a range of empirical specifications:

0 = did not find employment before they left the QLFS sample

1 = did find employment before they left the QLFS sample

The results are presented in Tables 6 and 7. Table 6 focuses on ethnicity and Table 7 on assimilation. We go through each of them in turn.[10]

The first thing to note from Table 6 is that on controlling for job search methods non-whites are less likely to enter employment than whites (Model 1) and this disadvantage is clearly evident for Blacks and the Pakistani/Bangladeshi groups (Model 2). Both models also reveal that the direct approach method is the most successful method of gaining employment. There is a strong effect throughout the estimations in Table 6 and being a member of an ethnic group does not diminish the importance of this effect relative to whites. Though personal networks do not seem to matter on their own they matter when interacted with the ethnic dummy and with each of the ethnic group dummies separately. With respect to the former we find that non-whites who make use of personal networks are less likely to enter employment (though the effect is just short of significance at traditional levels). This penalty is evident for South Asians (Indians and Pakistani/Bangladeshi) and Other. One interpretation of this is that these group's network are disproportionately made up of other low-skilled individuals and the low quality of this network implies a lower return from using networks. Other research does seem to support this in that these groups are among the most disadvantaged and also the least assimilated (Modood et al., 1997; Battu and Zenou, 2010). There is no effect for Blacks across the various job search methods. The lower penalty of employment for them holds regardless of job search method used.

[*Insert Table* 6 *here*]

Table 7 focuses on our assimilation variables. As one would expect the foreign born are less likely to enter employment. Though the signs on the years since migration (and its square) are in the direction expected the effects

[10] The analysis does not control for selection bias. Gregg and Wadsworth (1996) find that controlling for selection effects has no significant impact on the effect of institutional methods on the probability of entering work in Britain.

are not statistically significant. Again direct methods are the most successful in terms of gaining employment. Replying to adverts or using personal networks does not seem to improve matters. Crucially, the use of personal networks by those born outside the UK lowers the probability of gaining employment. The foreign born again are likely to have personal networks in their own community and have few contacts in the mainstream economy and hence the ineffectiveness of their networks.

[*Insert Table 7 here*]

Overall, these results provide strong support in finding an employment penalty through using personal networks as your main method of finding employment – this is clearly evident for non-whites (and in particular, Pakistanis and Bangladeshis) and those born outside the UK.

3.3 The effects on job level

The choice of job search method affects not only the probability of moving out of unemployment, but also the level (seniority) of the job that is obtained.[11] In the QLFS the most appropriate variable for capturing this is the socio-economic group (SEG), which reflects the skill requirement of the job, ranging from unskilled work (a 'score' of 1) to professional work (a 'score' of 6). The ranking nature of this variable lends itself to an ordered logit analysis, and thus we were able to examine the effect of different job search methods on the level of job obtained. Note that in this instance we used the second job search method variable – those respondents who had been in their current job for less than three months were asked which job search method had actually been successful in getting them their current job.

We can see from Table 8 that the ethnic minority males appear to be entering into higher level jobs than whites (model 1) with the gains evident for all ethnic groups except Indians (model 2). However, this is only part of the picture. The job search method that elicited the current job plays a major role in determining the job level attained, with the direct and advert approaches generating higher level jobs, and the personal network approach generating no such gain.

[*Insert Table 8 here*]

Perhaps the most interesting effects are obtained from the interaction of

[11] An alternative approach would be to focus on earnings. Though this information is available in the QLFS eannings information does not necessarily capture the quality of the match.

ethnicity and job search methods. Indeed, the interaction terms have larger coefficients than the non-interaction terms and go some to offsetting the effects of the stand alone ethnic term. Whilst direct approaches and adverts do result in a higher level job, ethnic group members who utilize such approaches make no such gain. In addition, those ethnic workers who obtained their current job as a result of their personal network are in a lower level job as a result. The coefficient on this interaction variable is not only significant, but also quite large, suggesting that (at this level of disaggregation) ethnic group members have poor quality personal networks, or they use them inefficiently. Furthermore, the value of the coefficient (-1.045) is larger than the ethnic coefficient ($+0.753$) indicating that the use of personal networks more than offsets the apparent positive effects from ethnicity; this combined effect is even more striking when we look at only the Pakistanis and Bangladeshis. In particular, in Model 2 we find that obtaining a job as a result of personal networks has a negative and significant effect for Pakistanis and Bangladeshis. This combined negative effect (coefficient $= -2.709$) outweighs the positive effect on job level from being Pakistani and Bangladeshi (coefficient $= -1.213$). This result seems to indicate that Pakistanis and Bangladeshis can do well but only if they avoid the use of personal networks.

Turning to the assimilation variables we have used previously (Table 9) (Models 3 and 4), we find that years since migration, its square, and a foreign born dummy on their own have no effect on job level. In contrast, and as before obtaining a job through the direct approach or adverts methods tends to significantly improve the job level with no effect for personal networks. However, as we have seen from Table 5 the foreign born tend not to utilize those methods (i.e. adverts) that generate a better job and those that do use such methods do not end up in a higher level job. The foreign born who obtain their current job through a direct approach to an employer actually end up with a lower level job.

[*Insert Table 9 here*]

To conclude, the use of personal networks typically does not result in a higher level job compared to the other approaches. This effect is most pronounced for Pakistanis and Bangladeshis; their use of personal networks actually results in a lower level job. Though there is no negative effect of personal networks for the foreign born the use of direct approaches for the foreign born does result in a lower level job. The effect of being foreign born acts indirectly - the foreign born tend to use the direct and adverts methods less, and therefore obtain fewer benefits from them.

4 Extensions

We extended our analysis in two ways. First, we explicitly account for the influx of Eastern European migrants. According to some estimates, well over half a million Eastern European migrants entered the UK from the point of EU enlargement in May 2004 up to the end of 2006, with the majority coming from Poland (Drinkwater et al., 2009). Given the timing and magnitude of Eastern European migration, we used the LFS from October-December 2004 to October-December 2008. This gives us seventeen quarters and whilst this does not give us a huge number of Eastern European respondents, it is sufficient for empirical estimation. Second, we utilise identity as an alternative measure of assimilation. Identity is defined as a person's sense of self and is bound to social categories and how people in these categories should behave (Akerlof and Kranton, 2010). Ethnic identity is then the degree to which individuals associate themselves to their ethnic background culture. There is a small literature examining the relationship between identity and labor market outcomes and whether there is a labor market penalty from possessing strong ethnic affiliations (Battu et al., 2007; Battu and Zenou, 2010; Bisin et al., 2010). Information on identity in the LFS started to be gauged in the Spring of 2001 via a national identity question: "What do you consider your national identity to be? Please choose as many or as few as apply". There are six possible responses: British, English, Scottish, Welsh, Irish and 'Other'. We group British, English, Scottish and Welsh into a single 'British' category and everyone else is in the Non-British category. Under this measure, just under 12% of the overall sample feel non-British, with the highest rates of "Britishness" evident for Whites (94%) and Black Caribbeans (84%). Identification with Britishness is lower for Pakistani/Bangladeshi (74%), Indian (68%), Other (58%), Black Africans (49%) and Eastern Europeans (4%). Whilst this seems sensible given the historical migrations patterns of the different groups, the identity measure in the LFS is crude relative to others reported in the literature (see Battu and Zenou, 2010) and does not capture the nuances of identity within the UK. Nevertheless, it has been used elsewhere (Manning and Roy, 2010) and does allow a basic examination of the relationship between identity and job search methods.

Given these two extensions we found the following.[12] In terms of the descriptive statistics in Tables 1 to 3, there are few changes. The ranking of

[12] All tables of this section are available upon request. Here we focus our discussion on the differences between what is obtained in this section (with the inclusion of East European migrants and the importance of identity) and in the previous ones.

job search methods used by the unemployed at the time of survey is relatively unchanged. However, networks know become the least important method with less than 8% of the unemployed sample using personal networks (compared to 11% previously). The Eastern Europeans join the Pakistanis and Bangladeshis in having networks as the third most important method used. In terms of the method that generated success for the newly employed, the relative importance of networks still holds for Pakistanis and Bangladeshis but also know for Eastern European migrants with nearly one-third of them using networks to obtain a job. Advertising as mechanism for gaining employment is very unpopular amongst Eastern Europeans with less than 10% reporting this as a successful method.

In contrast to the results in Tables 4 and 5 (Models 1 and 2), ethnicity matters more in the choice of job search methods. In particular, ethnicity raises the probability of using networks, with Pakistanis and Bangladeshis, Indians and to a lesser extent, Others, Eastern Europeans and Black Africans having a higher probability of using personal networks relative to Whites. Assimilation effects are still evident with those who see themselves as non-British (possibly the least assimilated) being more likely to use networks and the effect is stronger for ethnic group members who do not see themselves as British. Network use, is as before, higher for those who are married and those with below degree level qualifications and lower for ethnic group members with higher unemployment duration.

The relationship between job search methods and employment is similar to before (Tables 6 and 7) with direct approaches still having a positive effect on the probability of being in work. Ethnicity is still associated with lower employment but this relationship is no longer statistically significant and this perhaps reflects the changing composition of our ethnic dummy with the inclusion of Eastern Europeans, who may have arrived with a job in hand or obtained one very quickly on arrival. Assimilation, as measured by years since migration and being foreign born, is no longer related to employment. However, assimilation, measured via identification with Britishness, does though generate a strong employment penalty for those possessing a non-British identity. However, being ethnic and non-assimilated (measured via non-Britishness) actually results in a higher probability of being in work. This again, in part, may be driven by the Eastern European migrants though we are not able to confirm this via separate ethnic group estimations. There is little happening with respect to identity and job search methods.

All three job search methods here are associated with a higher job level, with networks associated more strongly with a higher job level relative to

institutional approaches. Ethnicity is still associated with a lower job level and this penalty is evident for Black Africans, Pakistani and Bangladeshis, Eastern Europeans and Other. As before there is a relative disadvantage from using networks for ethnic group members and this penalty is especially evident for Eastern Europeans. A lack of assimilation is associated with a lower job level measured either via being foreign born or possessing a non-British identity. Non-assimilated ethnic individuals who use networks have a lower level job although this is not statistically significant.

5 Conclusions

Though there is a considerable body of evidence examining ethnic disadvantage in the labor market, most of these studies tend to focus on individual characteristics such as education. This paper tries to gauge the importance of connections that individuals from different ethnic groups have with others and endeavours to ascertain whether such connections hinder labor market achievement. This is done by examining the job finding methods of various groups and in particular, the importance of using friends and family for employment.

At the heart of our analysis is the view that informal contacts or connections with friends or relatives can affect the matching of workers to jobs by providing information and/or influence. Our intuition is that less assimilated ethnic unemployed workers are more likely to use their friends and family as their main method of search but they have less chance of finding a job compared to whites and more assimilated ethnic workers that use formal search methods. Our empirical results support this intuition. Ethnicity matters with those from ethnic groups having a greater use of networks and this is evident for Pakistanis and Bangladeshis but also for recent migrants from Eastern Europe Assimilation effects are evident with the foreign born and ethnic group members with non-British identities being more likely to make use of personal networks. The longer the stay in the UK the greater the recourse to direct approaches to employers.

The greater use of personal networks amongst non-whites in general generates no discernible payoff as we find that non-whites who make use of their friends and family are no more likely to enter employment or have a higher level job when in employment. This "penalty" is evident in the case of the Bangladeshi and Pakistani ethnic group and for Eastern Europeans. Direct approaches whilst generally helpful in gaining employment do not help ethnic group members. Assimilation again matters with the foreign born who utilise personal networks experiencing no gain in employment or in job level. Ethnic

group members who do not think of themselves as being British also experience a lower job level.

The heterogeneity across groups in terms of the use of networks and the lack of payoff to networks suggest that blanket assumptions about the potential payoff to personal networks are unwarranted. Part of the explanation for the differences across ethnic groups has to lie with the quality or nature of contacts. Not all the unemployed are equally well connected. For some ethnic groups, friendship ties may display greater ethnic homophily so that their connections are with their own. If their own exhibit higher average unemployment, individuals in this group may have fewer friends and relative who are employed and can help them attain steady jobs.

References

[1] Abraham, K. G. (1993), "Comment on "Improving job matches in the U.S. labor market" by J. Bishop," *Brookings Papers on Economic Activity* 1, 391-396.

[2] Addison J.T. and Portugal, P. (2002) "Job search methods and outcomes," *Oxford Economic Papers* 54, 505-533.

[3] Akerlof, G.A. (1997), "Social distance and social decisions," *Econometrica* 65, 1005-1027.

[4] Akerlof, G.A. and R.E. Kranton (2000), "Economics and identity," *Quarterly Journal of Economics* 115, 715-753.

[5] Akerlof, G.A. and R.E. Kranton (2010), *Identity Economics: How Our Identities Shape Our Work, Wages, and Well-Being*, Princeton: Princeton University Press.

[6] Battu, H. and Y. Zenou (2010), "Oppositional identities and employment for ethnic minorities: Evidence from England," *Economic Journal* 120, F52 - F71.

[7] Battu, H. McDonald, M and Y. Zenou (2007), "Oppositional identities and the labor market," *Journal of Population Economics* 20, 643-667.

[8] Bentolila, S., Michelacci, C. and J. Suárez (2010), "Social contacts and occupational choice," *Economica* 77, 20-45.

[9] Bisin, A., Patacchini, E., Verdier, T. and Y. Zenou (2010), "Ethnic identity and labor-market outcomes of immigrants in Europe," Unpusblished manuscript, Stockholm University.

[10] Blackaby, D. Drinkwater, S. Leslie, D. and P. Murphy (1997), "A picture of male and female unemployment among Britain's ethic minorities," *Scottish Journal of Political Economy* 44, 182-197.

[11] Blackaby, D. Leslie, D. Murphy, P. and N. O'Leary (1999), "Unemployment among Britain's ethnic minorities," *Manchester School* 67, 1-20.

[12] Blau, D.M. and P.K. Robins (1990) "Job search outcomes for the employed and unemployed," *Journal of Political Economy* 98, 637-655.

[13] Boheim, R. and M.P. Taylor (2001), "Job search methods, intensity and success in Britain in the 1990s," ISER Working Paper, 07.

[14] Calvó-Armengol, A. (2004), "Job contact networks," *Journal of Economic Theory* 115, 191-206.

[15] Calvó-Armengol, A. and M.O. Jackson (2004), "The effects of social networks on employment and inequality," *American Economic Review* 94, 426-454.

[16] Calvó-Armengol, A. and Y. Zenou (2005) "Job matching, social network and word-of-mouth communication," *Journal of Urban Economics* 57, 500-522.

[17] Corcoran, M. Datcher, L. and G.J. Duncan (1980) "Most workers find jobs through word of mouth," *Monthly Labor Review* 103, 33-35.

[18] Cutler, D., Glaeser, E.L. and J.L. Vigdor (1999), "The rise and decline of the American ghetto," *Journal of Political Economy* 107, 455-506.

[19] Datcher Loury, L. and Y.M. Ioannides (2005), "Job information networks, neighborhood effects, and inequality," *Journal of Economic Literature* 42, 1056-1093.

[20] Drinkwater, S. Eade, J. and M. Garapich (2009), "Poles apart? E.U. enlargement and the labour market outcomes of immigrants in the UK," *International Migration* 47, 161-190.

[21] Falcón, L.M. (1995), "Social networks and employment for Latinos, Blacks, and Whites," *New England Journal of Public Policy* 11, 17-28.

[22] Falcón, L.M. and E. Melendez (2001), "The role of social networks in the labor market outcomes of Latinos, Blacks and Non-Hispanic Whites," Paper presented at the Russell Sage Foundation Conference on Residential Segregation Social Capital and Labor Markets, New York.

[23] Frijters, P. Shields, M.A. and S. Wheatley-Price (2005), "Immigrant job search in the UK: Evidence from panel data," *Economic Journal* 115, F359-F376.

[24] Granovetter, M. (1974), *Getting a Job*, Chicago, University of Chicago Press.

[25] Granovetter, M.S. (1983), "The strength of weak ties: A network theory revisited," *Sociological Theory* 1, 201-233.

[26] Granovetter (1995), *Getting a Job: A Study of Contacts and Careers*, 2nd edition, Chicago, University of Chicago Press.

[27] Green, G.P, Tigges, L.M. and D. Diaz (1999), "Racial and ethnic differences in job search strategies in Atlanta, Boston and Los Angeles," *Social Science Quarterly* 80, 263-278.

[28] Gregg, P. and Wadsworth, J. (1996), "How effective are state employment agencies? Jobcentre use and job matching in Britain," *Oxford Bulletin of Economics and Statistics* 58, 443-457.

[29] Holzer, H.J. (1987) "Informal job search and black youth unemployment," *American Economic Review* 77, 446-452.

[30] Holzer, H.J. (1988) "Search method use by the unemployed youth," *Journal of Labor Economics* 6, 1-20.

[31] Korenman S and S.C. Turner (1996), "Employment contacts and minority-white wage differences," *Industrial Relations* 35, 106-22.

[32] Manning, A. and S. Roy (2010), "Culture Clash or Culture Club? National Identity in Britain," *Economic Journal* 120, F72-F100.

[33] Modood, T. et al. (1997), *Ethnic Minorities in Britain: Diversity and Disadvantage*, London: Policy Studies Institute.

[34] Montgomery, J. (1991), "Social networks and labor-market outcomes: Toward an economic analysis," *American Economic Review* 81, 1408-1418.

[35] Mouw, T. (2002), "Racial differences in the effects of job contacts: Conflicting evidence from cross-sectional and longitudinal data," *Social Science Quarterly* 31, 511-538.

[36] Mortensen, D.T. and T. Vishwanath (1994), "Personal contacts and earnings. It is who you know!" *Labour Economics* 1, 187-201.

[37] Peach, C. (1996), "Does Britain have ghettos?" *Transactions of the Institute of British Geographers* 21, 216-235.

[38] Pellizzari, M. (2010), "Do friends and relatives really help in getting a good job?" *Industrial and Labor Relations Review* 63, 494-510.

[39] Rees, A. (1966), "Information networks in labor markets," *American Economic Review* 56, 559-566.

[40] Schmitt, J. and J. Wadsworth (1993), "Unemployed benefit levels and search activity," *Oxford Bulletin of Economics and Statistics* 55, 1-24.

[41] Topa, G. (2000), "Social interactions, local spillovers and unemployment," *Review of Economic Studies* 68, 261-295.

[42] Wahba, J. and Y. Zenou (2005), "Density, social networks and job search methods: Theory and application to Egypt," *Journal of Development Economics* 78, 443-473.

[43] Yinger, J. (1976), "Racial prejudice and racial residential segregation in an urban model," *Journal of Urban Economics* 3, 383-396.

[44] Yinger, J. (1995), *Closed Doors, Opportunities Lost: The Continuing Cost of Housing Discrimination*, New York: Russel Sage Foundation.

Table 1: The main job search method used by the unemployed at the time of the survey

	Direct approach	***Adverts***	***Institutional***	***Personal networks***	***Total (N)***
White	11.0	33.4	44.8	10.8	10,764
Black	6.7	32.3	51.4	9.6	418
Indian	11.9	32.9	42.9	12.3	252
Pakistani/Bangladeshi	12.5	24.0	49.3	14.2	408
Other	11.4	31.6	42.9	14.1	361
Total	11.0	33.0	45.0	11.0	
Total (N)	1,339	4,021	5,496	1,347	12,203

All figures, except those in the final row and the final column, are percentages

Table 2: The job search method that generated success for the newly-employed at the time of the survey

	Direct approach	***Adverts***	***Institutional***	***Personal networks***	***Total (N)***
White	14.6	23.6	32.8	29.0	16,466
Black	12.5	29.0	38.0	20.5	297
Indian	14.9	23.2	37.1	24.6	289
Pakistani/Bangladeshi	17.8	18.9	30.5	32.8	259
Other	19.3	18.0	34.4	28.4	384
Total	14.8	23.5	32.9	28.8	
Total (N)	2,611	4,163	5,828	5,093	17,695

All figures, except those in the final row and the final column, are percentages

Table 3: Descriptive statistics (means) of the variables used to explain the primary job search method chosen

	All	***Black***	***Indian***	***Pakistani/ Bangladeshi***	***Other***
Years since migration	2.107	9.859	13.540	13.368	8.108
Years since migration squared	62.044	298.773	397.056	365.706	179.172
Foreign born	0.110	0.529	0.560	0.669	0.606
First six waves	0.657	0.593	0.635	0.583	0.615
Married	0.382	0.270	0.488	0.549	0.369
Age	33.146	33.134	32.960	31.218	30.582
Age squared	1294.885	1265.110	1273.976	1139.179	1073.172
Qualifications = Degree	0.162	0.215	0.216	0.123	0.168
Qualifications = A-level	0.252	0.208	0.192	0.141	0.186
Qualifications = O-level	0.189	0.133	0.196	0.146	0.161
Qualifications = Other	0.155	0.239	0.200	0.271	0.304
Time here 1	0.112	0.117	0.048	0.096	0.142
Time here 2	0.794	0.792	0.893	0.836	0.748
Health	0.184	0.158	0.151	0.196	0.172
Ethnic unemployment duration		16.304	12.482	13.088	12.408
Local unemployment rate	3.239	3.840	3.201	3.727	3.748

Table 4: The determinants of the primary job search method – Model 1 (single ethnic dummy)

	Direct approach		***Adverts***		***Personal networks***	
Ethnic	0.148	1.32	-0.044	0.56	0.179	1.68
First six waves	0.056	0.84	-0.032	0.72	0.118	1.76
Married	0.192	2.38	0.256	5.12	0.225	3.08
Age	-0.144	9.76	-0.019	1.96	-0.021	1.49
Age squared	0.002	8.81	0.000	3.22	0.000	2.03
Qualifications = Degree	0.220	2.13	0.692	10.16	-0.424	3.78
Qualifications = A-level	0.202	2.27	0.459	7.46	0.025	0.29
Qualifications = O-level	0.266	2.95	0.441	6.47	0.100	1.06
Qualifications = Other	-0.204	1.89	0.169	2.38	0.018	0.19
Time here 1	-0.084	0.62	0.182	1.90	0.173	1.24
Time here 2	0.060	0.57	0.275	3.61	0.225	2.01
Health	-0.261	2.90	0.052	0.96	-0.119	1.46
Ethnic unemployment duration	-0.021	2.92	-0.003	1.23	-0.007	1.73
Local unemployment rate	-0.026	0.89	-0.074	3.69	0.015	0.52
Constant	0.945	3.56	-0.635	3.36	-1.576	5.83
Observations	12,031					

Table 5: The determinants of the primary job search method – summary of Models 1 through to 4

	Direct approach	***Adverts***	***Personal networks***
Model 1			
Ethnic	0.148 1.32	-0.044 0.56	0.179 1.68
Model 2			
Black	-0.297 1.38	-0.014 0.11	-0.133 0.70
Indian	0.272 1.24	0.039 0.25	0.239 1.12
Pakistani/Bangladeshi	0.255 1.47	-0.294 2.20	0.182 1.09
Other	0.353 2.25	0.194 1.67	0.325 2.10
Model 3			
Years since migration	0.058 2.15	0.028 1.65	-0.019 0.84
Years since migration squared	-0.001 2.45	-0.001 1.71	0.000 0.09
Foreign born	-0.072 0.29	-0.340 2.01	0.497 2.43
Model 4			
Black	-0.363 1.64	0.062 0.49	-0.220 1.12
Indian	0.169 0.76	0.076 0.47	0.215 0.96
Pakistani/Bangladeshi	0.112 0.60	-0.231 1.61	0.109 0.60
Other	0.258 1.55	0.261 2.12	0.208 1.23
Years since migration	0.052 1.93	0.032 1.83	-0.024 1.05
Years since migration squared	-0.001 2.22	-0.001 1.82	0.000 0.33
Foreign born	-0.073 0.28	-0.403 2.29	0.481 2.23

Table 6: The determinants of finding employment (Models 1 & 2)

	Model 1	***Model 2***
Ethnic	-0.491 4.19	
Black		-0.860 3.62
Indian		-0.318 1.20
Pakistani/Bangladeshi		-0.535 2.49
Other		0.122 0.56
Direct approach	0.202 2.07	0.260 3.32
Adverts	-0.033 0.46	-0.014 0.24
Personal networks	0.110 1.01	0.032 0.38
Direct approach * Ethnic	0.035 0.84	
Adverts * Ethnic	0.013 0.39	
Personal networks * Ethnic	-0.101 1.86	
Direct approach* Black		-0.332 0.49
Adverts* Black		0.329 0.95
Personal networks * Black		-0.200 0.30
Direct approach* Indian		-0.166 0.32
Adverts* Indian		0.037 0.10
Personal networks * Indian		-1.137 1.68
Direct approach* Pakistani/Bangladeshi		-0.021 0.05
Adverts* Pakistani/Bangladeshi		0.178 0.47
Personal networks*Pakistani/Bangladeshi		-1.110 1.72
Direct approach* Other		-0.185 0.43
Adverts* Other		-0.606 1.75
Personal networks * Other		-0.874 1.73
Observations	10,118	10,118

These specifications included all the other explanatory variables presented in Table 4, plus a variable for the number of further waves of data the respondent was expected to be present in. The lower number of observations compared to Table 4 arose from the fact that we excluded those unemployed who only became unemployed in the fifth of their five appearances in the QLFS dataset (and therefore could not be observed finding employment).

Table 7: The determinants of finding employment (Models 3 & 4)

	Model 3	***Model 4***
Years since migration	0.035 1.59	0.033 1.50
Years since migration squared	-0.001 1.17	-0.001 1.08
Foreign born	-0.675 3.20	-0.600 2.67
Direct approach	0.259 3.48	0.255 3.27
Adverts	-0.015 0.28	-0.013 0.22
Personal networks	-0.029 0.36	0.021 0.25
Direct approach* Foreign born		0.049 0.19
Adverts * Foreign born		-0.021 0.11
Personal networks * Foreign born		-0.590 1.95
Observations	10,118	10,118

These specifications included all the other explanatory variables presented in Table 4, plus a variable for the number of further waves of data the respondent was expected to be present in. The lower number of observations compared to Table 4 arose from the fact that we excluded those unemployed who only became unemployed in the fifth of their five appearances in the QLFS dataset (and therefore could not be observed finding employment).

Table 8: The determinants of the level of job found (Models 1 & 2)

	Model 1	***Model 2***
Ethnic	0.753 4.24	
Black		0.495 1.65
Indian		0.333 0.79
Pakistani / Bangladeshi		1.213 3.63
Other		0.873 2.63
Direct approach	0.286 2.52	0.288 2.53
Adverts	0.293 3.27	0.292 3.46
Personal networks	-0.083 0.67	-0.085 0.69
Direct approach* Ethnic	-0.646 1.80	
Adverts * Ethnic	-0.464 1.58	
Personal networks * Ethnic	-1.045 2.20	
Direct approach* Black		0.175 0.20
Adverts* Black		0.265 0.49
Personal networks * Black		0.348 0.33
Direct approach* Indian		-0.400 0.53
Adverts* Indian		-0.207 0.33
Personal networks * Indian		-0.523 0.51
Direct approach*Pakistani/Bangladeshi		-0.645 0.90
Adverts*Pakistani/Bangladeshi		-0.427 0.72
Personal networks*Pakistani/Bangladeshi		-2.709 2.88
Direct approach* Other		-1.082 1.90
Adverts* Other		-1.250 2.29
Personal networks * Other		-0.866 1.09
Observations	2,737	2,737

These specifications included the marital status, age and educational qualification variables from Table 4. The lower number of observations compared to Table 4 arose from the fact that we are only looking at the newly employed.

Table 9: The determinants of the level of job found (Models 3 & 4)

	Model 3	***Model 4***
Years since migration	0.041 1.20	0.044 1.27
Years since migration squared	-0.001 1.06	-0.001 1.14
Foreign born	-0.128 0.40	0.035 0.10
Direct approach	0.230 2.13	0.286 2.55
Adverts	0.241 2.98	0.256 3.04
Personal networks	-0.163 1.37	-0.141 1.15
Direct approach* Foreign born		-0.815 1.93
Adverts * Foreign born		-0.182 0.61
Personal networks*Foreign born		-0.272 0.58
Observations	2,737	2,737

These specifications included the marital status, age and educational qualification variables from Table 4. The lower number of observations compared to Table 4 arose from the fact that we are only looking at the newly employed